

# INTERNATIONAL SEARCH REPORT

Rec'd PCT/PTO 22 APR 2005

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International application N

PCT/JP03/13718

## A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl<sup>7</sup> H03H7/01, H03H7/46, H03H7/42, H01P1/15, H04B1/44

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl<sup>7</sup> H03H7/01, H03H7/46, H03H7/42, H01P1/15, H04M1/44

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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Kokai Jitsuyo Shinan Koho	1971-2004	Jitsuyo Shinan Toroku Koho	1996-2004

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI/L

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 2001-60839 A (Murata Mfg. Co., Ltd.), 06 March, 2001 (06.03.01), Fig. 1; Par. No. [0019] & EP 1077528 A2	1-8
Y	JP 10-79601 A (NEC Corp.), 24 March, 1998 (24.03.98), Figs. 1, 3, 7 & GB 2316820 A & AU 9736746 A & US 5883553 A & KR 98024259 A	1, 2, 4
Y	JP 2002-171187 A (Toshiba Corp.), 14 June, 2002 (14.06.02), Fig. 6; Par. No. [0003] & US 2002/0067226 A1 & EP 1213835 A1	1, 4

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier document but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search  
23 January, 2004 (23.01.04)

Date of mailing of the international search report  
10 February, 2004 (10.02.04)

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PCT/JP03/13718

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 8-321738 A (Matsushita Electric Industrial Co., Ltd.), 03 December, 1996 (03.12.96), Full text; all drawings & EP 0744831 A2 & US 5926466 A	1-3
Y	JP 51-7793 Y1 (The Furukawa Electric Co., Ltd.), 02 March, 1976 (02.03.76), Full text; all drawings (Family: none)	3
Y	JP 11-144961 A (NGK Spark Plug Co., Ltd.), 28 May, 1999 (28.05.99), Par. Nos. [0014], [0029] (Family: none)	5
Y	JP 2002-314371 A (Murata Mfg. Co., Ltd.), 25 October, 2002 (25.10.02), Full text; all drawings & EP 1251638 A2 & US 2002/0167378 A1 & KR 2002081147 A & CN 1381951 A	6
Y	JP 2003-283296 A (TDK Corp.), 03 October, 2003 (03.10.03), Full text; all drawings (Family: none)	6
Y	JP 2002-304178 A (Agilent Technologies Inc.), 18 October, 2002 (18.10.02), Full text; all drawings & US 2002/0109563 A1 & EP 1233511 A2	6
Y	JP 2002-280926 A (Hitachi Metals, Ltd.), 27 September, 2002 (27.09.02), Figs. 4, 5 (Family: none)	7
A	JP 2001-345729 A (Murata Mfg. Co., Ltd.), 14 December, 2001 (14.12.01), Full text; all drawings & DE 10115719 A1 & FR 2810797 A1 & US 2002/0034934 A1 & GB 2366702 A & DE 10164807 A1	1-8
A	JP 2001-203601 A (Hitachi Metals, Ltd.), 27 July, 2001 (27.07.01), Full text; all drawings (Family: none)	1-8